

What is claimed is:

1. A dual band RF tuning circuit comprising:
a first impedance element and a second impedance
element between an RF input port and an RF output port,
the tuning circuit being tuned by the first and second
impedance elements to receive a first RF signal and to
provide the first RF signal at the output port,

the tuning circuit being tuned by the first impedance
element alone to receive a second RF signal and to provide
the second RF signal at the output port,

a switching transistor being switched on and off by
changing its bias voltage,

a band control voltage source connected to the
switching transistor to change its bias voltage, and

the switching transistor having conducting gates
connected to the second impedance element to short the
second impedance element, which tunes the tuning circuit by
the first impedance element.

2. A dual band RF tuning circuit as recited in claim 1,
wherein the first and second impedance elements are
inductance impedance elements.

3. A dual band RF tuning circuit as recited in claim 1,
wherein the first and second impedance elements are
capacitance impedance elements.

4. A dual band RF tuning circuit as recited in claim 1,
and further comprising: conducting drain and source nodes of
the switching transistor being in parallel connection with
the second impedance element to open circuit the second
impedance element.

5. A dual band RF tuning circuit as recited in claim 4,
wherein the first and second impedance elements are
inductance impedance elements.

6. A dual band RF tuning circuit as recited in claim 1,
and further comprising: a resistance connected across the

conducting gates of the switching transistor, the source of band control voltage being connected to a dividing point of the resistance, and the conducting drain and source nodes of the switching transistor being in series connection with the second impedance element to open-circuit the second impedance element.

7. A dual band RF tuning circuit as recited in claim 6, wherein the first and second impedance elements are capacitance impedance elements.

8. A dual band RF tuning circuit as recited in claim 6, wherein the voltage divider has a current blocking resistance in parallel connection with the conducting drain and source nodes of the switching transistor, and the source of band control voltage is connected through a resistor to a dividing point of the current blocking resistance.

9. A dual band RF tuning circuit comprising:
a first inductance impedance element and a second inductance impedance element between an RF input port and an RF output port,

the tuning circuit being tuned by the first and second inductance impedance elements to receive a first RF signal and to provide the first RF signal at the output port,

the tuning circuit being tuned by the first inductance impedance element alone to receive a second RF signal and to provide the second RF signal at the output port,

a switching transistor being switched on and off by changing its bias voltage,

a band control voltage source connected to the switching transistor to change its bias voltage,

the switching transistor having conducting drain and source nodes connected to the second inductance impedance element to short the second inductance impedance element, which tunes the tuning circuit by the first inductance impedance element,

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a first capacitance impedance element and a second capacitance impedance element between the RF input port and the RF output port,

the tuning circuit being tuned by the first and second capacitance impedance elements to receive a first RF signal and to provide the first RF signal at the output port,

the tuning circuit being tuned by the first capacitance impedance element alone to receive a second RF signal and to provide the second RF signal at the output port,

a second switching transistor being switched on and off by changing its bias voltage,

the band control voltage source connected to the second switching transistor to change its bias voltage, and

the second switching transistor having conducting drain and source nodes connected to the second capacitance impedance element to short the second capacitance impedance element, which tunes the tuning circuit by the first capacitance impedance element.

10. A dual band RF tuning circuit as recited in claim 9, and further comprising: a current blocking resistance in parallel connection with the second inductance impedance element, and the conducting drain and source nodes of the switching transistor being in parallel connection with the second inductance impedance element to short the second inductance impedance element.

11. A dual band RF tuning circuit as recited in claim 9, and further comprising: a resistance connected across the conducting gates of the switching transistor, and the source of band control voltage being connected to a dividing point of the resistance, and the conducting drain and source nodes of the switching transistor being in series connection with the second capacitance impedance element to short the second capacitance impedance element.

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12. A dual band RF tuning circuit as recited in claim 9, wherein the resistance is a current blocking resistance in parallel connection with the conducting drain and source nodes of the switching transistor, and the source of band control voltage is connected through a resistor to a dividing point of the current blocking resistance.

13. A dual band RF tuning circuit as recited in claim 9, and further comprising: the switching transistor is an EFET transistor, and a further resistor is referenced to ground and is connected at the gate of the EFET transistor.

14. A dual band RF tuning circuit as recited in claim 9, and further comprising: the output of the switching transistor being supplied to an amplifier at an input side of the dual band RF tuning circuit.

15. A dual band RF tuning circuit as recited in claim 9, and further comprising: the output of the switching transistor being supplied to an amplifier at an input side of the dual band RF tuning circuit, and a duplicate of the switching transistor being supplied to an output port of the dual band RF tuning circuit, whereby, the input side and the output side are tuned to dual band frequencies.

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